AVT 9480A

Vandal Resistant Megapixel Mini Dome

User's Manual

October 13, 2008

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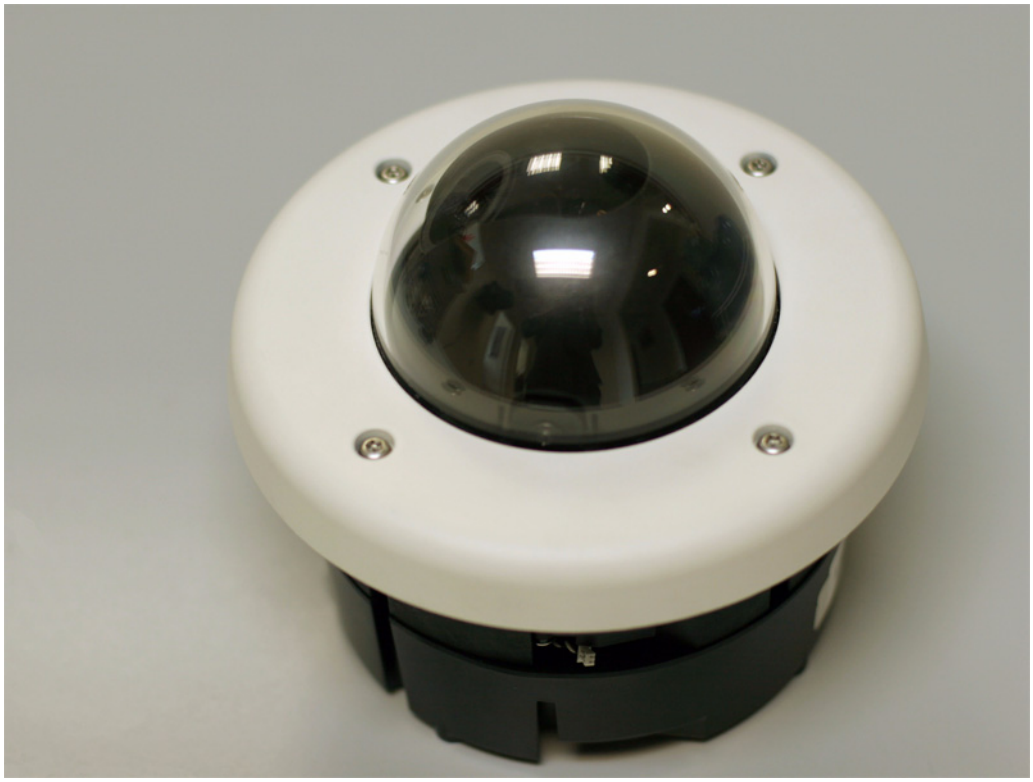
Overview 1

The AVT 9480A is a highly compact, dual-stream megapixel mini dome camera for video monitoring and surveillance over IP networks. It is built on open standards to provide long-term investment protection.

The AVT 9480A mini dome camera can be used with the iSOC NVMS applications. Furthermore, it enables configuration and video viewing from web browsers and configuration via Telnet.

AVT 9480A camera modules are not interchangeable with with 9460A camera modules.



Technical Support

If you encounter any problems, please contact DVTel Technical Support. DVTel Technical Support can be reached Monday-Friday, 6 am-8 pm at (888) DVTEL 77 or support@dvtel.com.

Hardware Products Warranty and Returns Statement

Warranty

DVTel warrants, to the original purchaser, a DVTel branded HARDWARE PRODUCT furnished will generally function in accordance with DVTel's written product specifications in effect at the time of shipment, and that, under normal use, it will be free from defects in materials and workmanship, for a period of two years from the date of delivery as evidenced by the DVTel packing slip or other transportation receipt. DVTel does not warrant that PRODUCTS are error free. DVTEL does not warrant or guarantee the use or compatibility of the camera with any specific video management software product.

The warranty becomes void if the product is altered in any way.

DVTel's responsibility under this warranty shall be to repair or replace, at its option, defective work or returned parts, with transportation charges for the returned equipment's shipping to DVTel's repair center paid for by the buyer and return shipping charges covered by DVTel. If DVTel determines that the Product is not defective within the terms of the warranty, the buyer shall pay all handling and transportation costs. If a materials and workmanship defect appears within such warranty period, Customer may return the defective product for replacement with the same or a later model that performs substantially the same function as the unit being replaced or for repair, at DVTel's option.

Warranty Exclusion

The Warranty for equipment shall become void if a hardware PRODUCT has been subjected to water, excessive dust, fire, excessive heat, chemicals, acids, solvents, physical attack, voltage surges, brownouts, or similar circumstances which ordinarily may damage electrical components, or by repairs or modifications made or attempted to be made to components other than by DVTel or under its direction. Products showing damage by misuse or abnormal conditions of operation, or which have been modified by the buyer or repaired or altered outside of DVTel's repair center without specific authorization from DVTel shall be excluded from this warranty.

DVTel reserves the right to make changes to its specifications from time to time. DVTel warrants that it is empowered to grant the rights granted herein.

Limitations of Warranty

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Equipment shipped ex works by DVTel shall become the property of buyer upon transfer to the common carrier. The buyer is responsible for communicating directly with the carrier and immediately requesting carrier's inspection upon evidence of damage in shipment.

The buyer must obtain a Return Materials Authorization (RMA) number and shipping instructions from DVTel prior to returning any product under warranty. Do not return any DVTel product to the repair center until RMA and shipping instructions are received.

Configuration and Installation 2

The following procedures are performed to configure and set up the mini dome camera:

- ***Bench Installation of the AVT 9480A Mini Dome Camera***
- ***Configuring the Mini Dome Camera***
- ***Site Installation of the AVT 9480A Mini Dome Camera***
- ***Camera Installation***
- ***Configuring the I/Os***
- ***Updating the Firmware***
- ***Red/Blue Display***

Bench Installation of the AVT 9480A Mini Dome Camera

The AVT 9480A Mini-Dome contains the following parts

- Camera/Housing Assembly (DVT9480ARC-TD2)
- Surface ring if applicable
- Power and alarm cables
- Rubber cable gland
- Screws packages
- Mounting template
- Installation Guides
  - Mini-Dome Install Guide
  - Connections/Latitude Setup Guide

All other mounting hardware must be provided by the installer. The power source options - 12VDC, 1A (UL, CE approved) or 802.3af compliant power source are sold separately or provided by the installer.

Bench Installation

Connect the vandal dome either to 12V DC power source or an 802.3af compliant Power Over Ethernet (POE) switch or midspan. If connecting to a 12V DC supply use the appropriate accessory cable and plug into the power connector.

The following shows the 12VDC connection options:

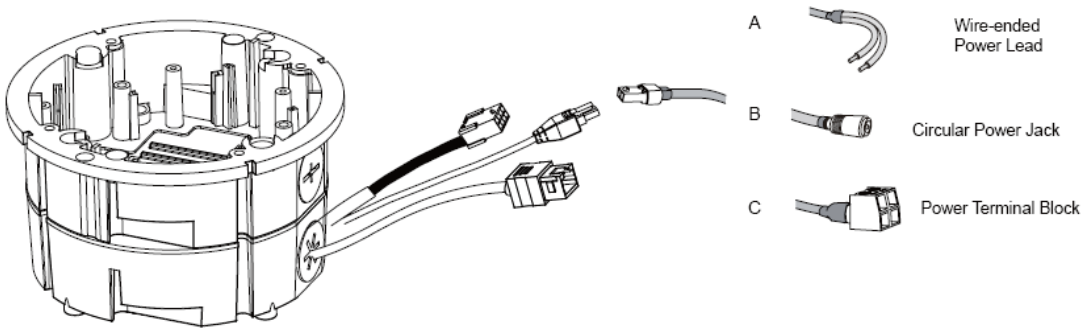


Figure 2-1: 12VDC Connection Options

If using PoE, just connect to the RJ45 as shows:

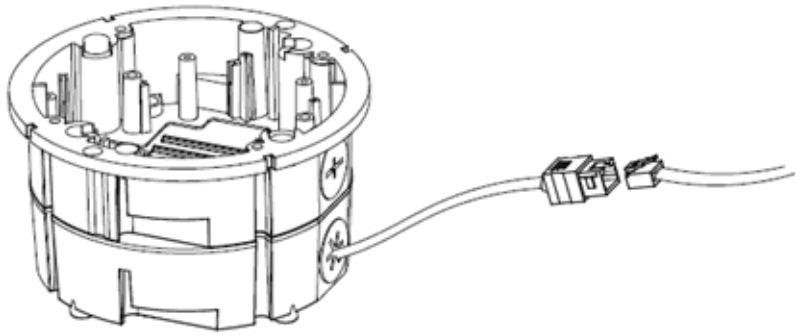


Figure 2-2: RJ45 Connection Options

Configuring the Mini Dome Camera

Upon receiving AVT 9480A mini dome camera, its basic parameters, such as the IP address, need to be configured.

To configure the device, you need the Device Configurator. This application is provided along with the mini dome camera. The Device Configurator is an executable file that is compressed in a .rar file along with the following additional files:

- Configurator.ini
- CRC.dll
- IPAddressControlLib.dll
- VsipApi.dll

Once you extract all the files contained in the .rar file to the hard disk of your computer, and open the *Device Configurator* executable file, the application is ready to use.

In addition, the Device Configurator is accessible via the Unified Configurator from the iSOC NVSM 5.3 AdminCenter.

Prerequisites

The following hardware and software requirements must be fulfilled to configure AVT 9480A mini dome cameras:

- Windows XP
- An Ethernet network card

Configuring the Mini Dome Camera Parameters

When installing AVT 9480A mini dome cameras, you have to change their IP address to ensure the compatibility with an existing network. The primary default IP address of the mini dome camera is created using the APIPA addressing scheme and is in the range 176.(a+16).bc.de, based upon the hex to decimal conversion of the MAC address of the individual device: *nn-nn-nn-na-bc-de*. When resetting the mini dome camera to the factory default values, the IP will change back to the address created by the APIPA.

After discovering the mini dome camera on the IP network, its network configuration parameters need to be set. Mini dome cameras that reside on the same network must have unique IP addresses.

To set the parameters of a mini dome camera

1. In a lab, unpack the mini dome camera and place it on a table.
2. Connect the mini dome camera to a power supply or a POE power source.
3. Connect the mini dome camera in one of the following ways:
   - When using an external power supply (12VDC, 1A - sold separately), establish the Ethernet connection by plugging a cable (straight-through or crossover) into the LAN 10/100 connector on the back of the mini dome camera.

     A crossover cable should be used to directly connect the device to a computer; a straight-through cable should be used to integrate the mini dome camera on a network.
   - When using the POE, the Ethernet connection is automatically established after being connected to the power supply.

   For more detailed information and illustrations, see the relevant *Quick Installation Guide*.
4. If you are using the regular power supply, connect the power supply as described in the relevant *Quick Installation Guide*.

   For any other power supply, refer to the manufacturer documentation for the proper wiring scheme.

   The mini dome camera is powered up as soon as power is provided.
5. Start the *Device Configurator* by accessing the iSOC NVSM 5.3 AdminCenter and selecting **Pro Line A** in the Unified Configurator or by double-clicking the *Configurator.exe* file.

The *Device Configurator* appears.

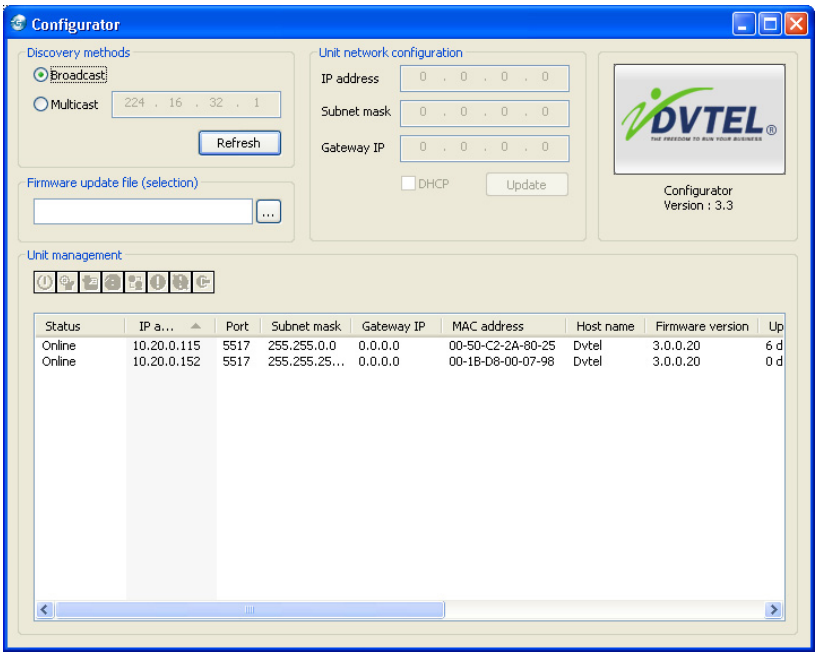


Figure 2-3: Device Configurator

6. Once the *Device Configurator* appears, the Discovery process starts automatically.

   The discovered mini dome cameras appear in the *Unit Management* pane
7. In the *Unit Management* pane, select the desired mini dome camera.

   Once a mini dome camera is selected, the Network configuration pane is enabled.
8. In the *IP address* field, enter the IP address of the mini dome camera.
9. In the *Subnet Mask* field, enter the subnet mask of the mini dome camera.
10. In the Gateway IP field, enter the gateway IP address of the mini dome camera.
11. Click **Update**.

    The mini dome camera will reset and the new network configuration parameters will appear in the *Unit Management* pane. The initial configuration of the mini dome camera is now complete. You can perform further configuration with the Telnet and web interface.

Site Installation of the AVT 9480A Mini Dome Camera

After the mini dome camera is configured successfully, it can be installed in its final location.

Use the provided mounting template to mark out and create the necessary holes in the mounting surface.

To install the mini dome camera

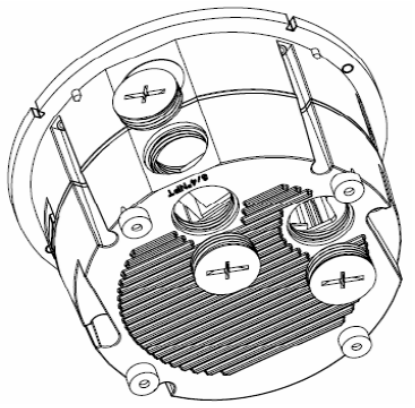
1. Use the provided mounting template to mark out and create the necessary holes in the mounting surface.

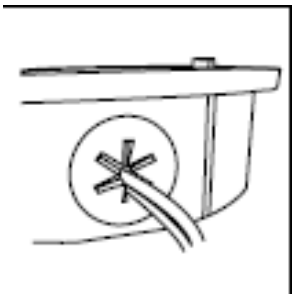
   Table 2-1: Mount Types

Mount Type	Instructions
Surface	Create four holes at the template position marked (T1). (Use four No12) fixing screws and wall plugs. For addition support there are 3 more mounting holes in the surface ring (T4) that may also be used.
Recessed	Create an aperture in the mounting surface to a diameter of 139mm as indicated by the (T2) circle.

2. Decide which entry point in the housing will be used to route wires and remove the appropriate conduit plug.

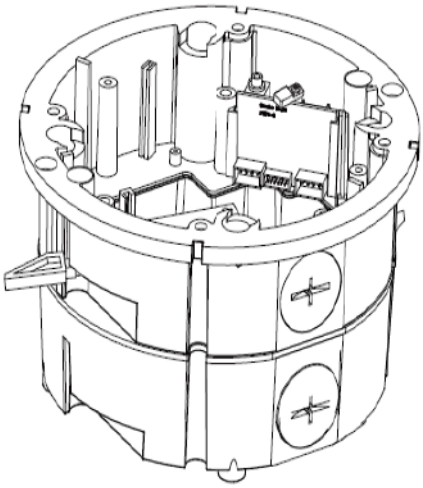
   If installing in an interior location and conduit will not be used, be sure to install a rubber cable gland in the opening before passing the wires through the opening.





3. Mount the camera using one of the following methods — Recessed or Surface.

Recess Mount



The AVT 9480A units are provided with fold out wings for quick and easy installation into a ceiling without the need for a special mounting kit. To use the fold out wings, turn silver-colored screws clockwise to first extend the locking arms and then tighten them against the mounting surface. Tighten the screws sufficiently to compress the o-ring moisture seals located underneath the screw heads, however: DO NOT OVERTIGHTEN.

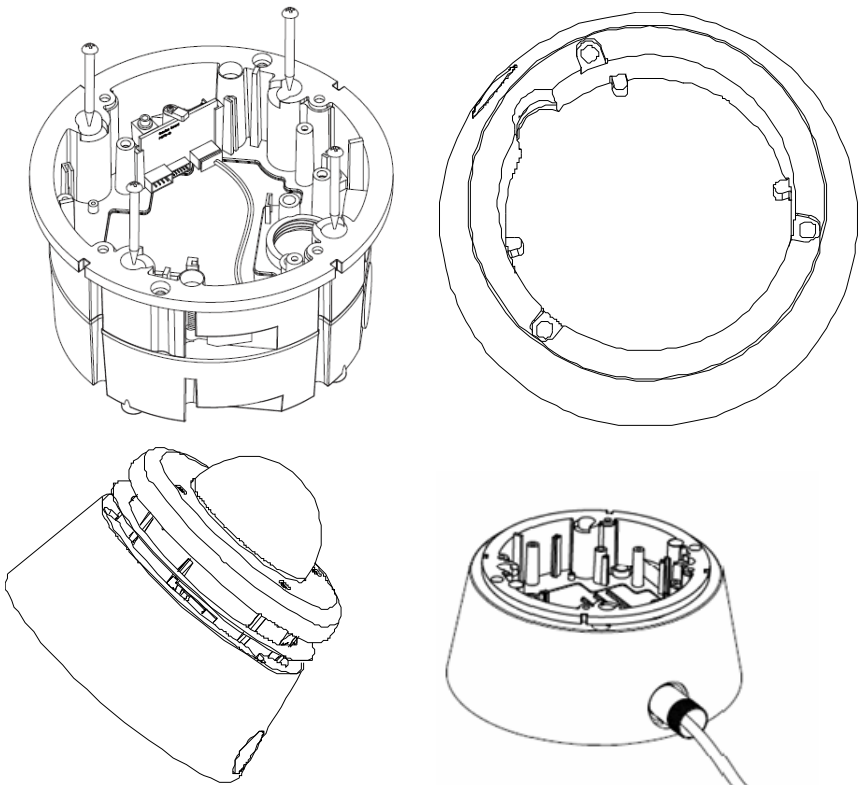
Note:

For outdoor installations or wet environments always install the large rubber gasket to seal the dome properly to maintain the IP rating.

If mounting in a drop ceiling a backer plate may be needed depending on the integrity of the ceiling tile. You could also attach a pipe hanger to the tapped hole in the bottom of the housing for additional support.

Surface Mount

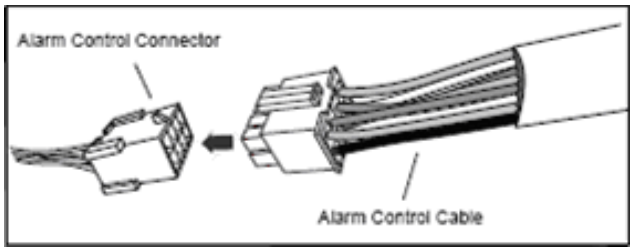
You have two options when using the surface ring, it either needs to be mounted before the base is installed (only required if using the 3 addition mounting locations on the surface ring) or you insert the dome housing into the surface ring before mounting with the screw locations shown below.

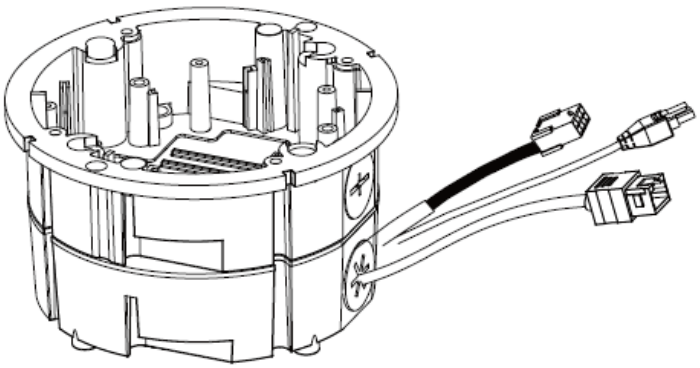


4. When mounting make sure you install the large rubber gasket between the housing and the surface ring or if recessed mounting between the housing and mounting surface.
5. Insert the network cable and optional power cable through one of the conduit entry points and connect them to the dome as described under bench installation.
6. If running conduit to the unit you will need to install a 3” threaded pipe nipple through the surface ring and thread this into the housing. Use appropriate sealing agent on the connection to maintain the IP rating of the housing.
7. If applicable, connect the audio and alarm inputs/outputs to the 8 wire cable located in the lower part of the housing. Refer to the following table to determine which wires correspond to the inputs outputs relevant to your installation.

Alarm and Audio Connections

The AVT 9480A provides an accessory cable to easily connect audio input and output, alarm inputs and relay output.





Note:

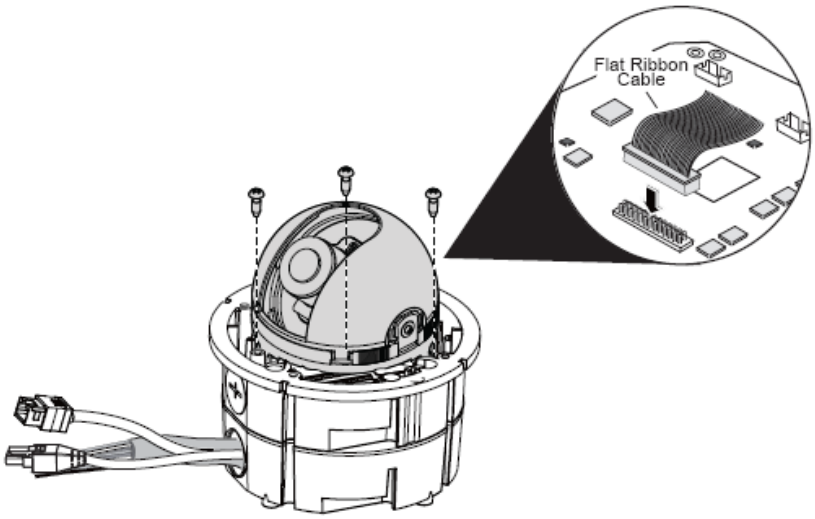
- *The top of the camera is omitted from the picture to clearly show the alarm cable.*
- *When connecting alarms or audio, snap on the EMI suppression bead, provided in the accessory kit, over the factory installed cable assembly to ensure emissions compliance (FCC part 15, subpart B, class A).*
- *The mini dome cameras are provided with Ethernet Jumper cable for initial configuration. For permanent installation use RJ45 CAT-5 shielded cable and snap on the EMI suppression bead provided in the accessory kit to ensure emissions compliance (FCC part 15, subpart B, class A).*

Table 2-2: Input and Output Wire Setup

Wire Color	Description	Direction / Comment
Brown	Alarm Input 1	
Orange	Audio Input	
Green/White	Alarm Ground	
Orange /White	Audio Ground	
Brown/White	Alarm Input 2	
Green	Audio Output	
Blue	Alarm Output(*)	Output 60V AC/DC at 500 mA max
Blue/White	Alarm Output(*)	Output 60V AC/DC at 500 mA max

Camera Installation

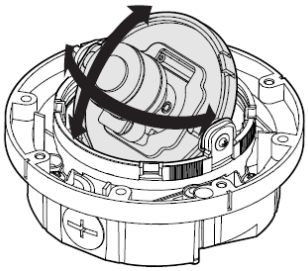
1. The MP camera is factory installed. If it is necessary to remove the camera assembly at any time, first remove the camera liner then proceed to remove the 26 pin flat ribbon cable from the back of the camera. After removing the cable from the back of the camera the gimble assembly can be removed by loosening the 3 screws shown below.



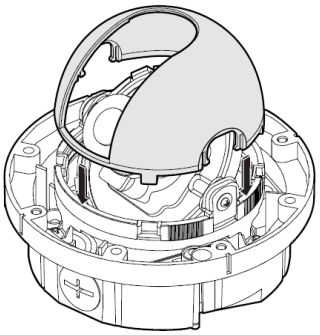
Bottom section of housing not shown in the image, top view for reference only.

2. Once you have the gimble secured to the housing, position the camera at the desired angle by rotating the gimble. There is a service jack in each housing to plug a service cable to for local video adjustment and programming.

   To view the video connect via the cameras web browser interface or with your system software via a PC.



3. Use the lens top lever to adjust focus (A1) and the bottom lever to adjust the field of view (A2).
4. Once the focus and field of view are adjusted, fit the liner onto the camera.

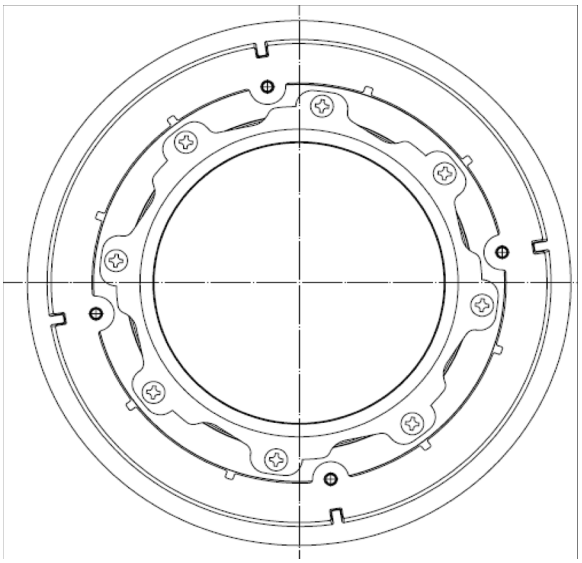


Tip:

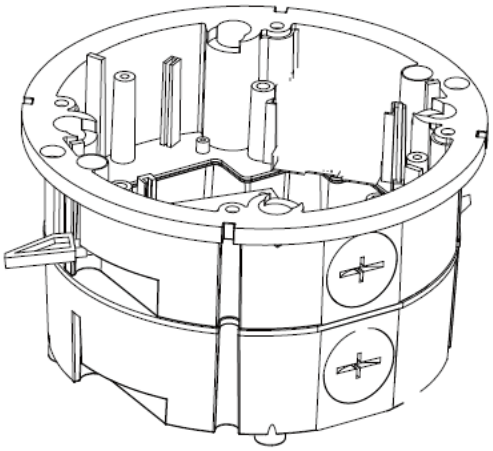
Perform the final focus through the lids bubble by holding it up to the lens reversed to confirm final results.

5. Fit the lid onto the housing by lining up the four notches as shown below. Use the provided torx driver to secure the four lid screws to the housing.

Bottom view of lid



Keyed to fit into base



Configuring the I/Os

The input/output features on the multipole connector on the back of the device are used for alarms (or events) and audio control. The mini dome camera has two alarm inputs and one relay output terminals.

See "Input and Output Wire Setup" on page 9.

Audio

To activate audio between a transmitter and a receiver, both devices must support audio.

Data Transmission

Two transmission modes for audio data are available:

- Full duplex — Data is transferred in both directions simultaneously.
- PTT/PTL — The push-to-talk/push-to-listen mode allows you to control audio communication between two devices.

To activate the audio transmission channel for PTT on the AVT 9480A camera, you must trigger an activation switch (for example, a button) that is based on the shorting of the ground and input 2 terminals.

If the PTT switches of both the transmitter and receiver are activated at the same time, the receiver will have precedence: Audio will be transferred from the receiver to the transmitter. If the PTL and PTT functions of the receiver are activated at the same time, PTT will be activated and PTL will be ignored.

Audio Input/Output Types

The mini dome camera supports the following audio types:

- The Line-in audio type, which requires a pre-amplifier. You connect the audio input on the device to the Line-out connector on the pre-amplifier.
- The MIC-in audio type, which does not require pre-amplification. You connect the audio input directly to the microphone.

Set the input type via the CLI or iSOC NVMS.

The only available output type is Speaker. You plug a speaker (with an amplifier) directly into the audio output of the device.

Via the CLI or iSOC NVMS, you can set the audio output setting.

Specifications

The audio input/output specifications are (where 0 dBV = Vrms):

Table 2-3: Audio Input/Output Specification Parameters

Mode	Gain	Impedance	Frequency range
Line-in	-20 to 0 dBV	30 kohm	300–10000 Hz, depending on sampling frequency
MIC-in	-34 to -14 dBV	40 kohm	300–3600 Hz
Speaker	-90 to 0 dBV	10 kohm	300–10000 Hz, depending on sampling frequency

Alarms

The mini dome cameras can generate and receive alarms. The mini dome camera has two alarm inputs and one relay output terminals.

A typical configuration requires you plug an event sensor to the input 1 and ground I/O terminals on the AVT 9480A camera, and your alarm system to the Out section of a receiver.

You can activate the alarm process via iSOC NVMS.

Updating the Firmware

You can update the firmware of the AVT 9480A mini dome cameras with the *Device Configurator* tool. For the detailed procedure, refer to the documentation of the *Device Configurator*.

The only method to update the firmware is through an IP network connection. If this update procedure fails, repeat procedure.

Take the following facts regarding firmware update using the IP network into consideration:

- Ensure that the IP link is stable before starting the procedure; therefore it is not recommended to perform it over the Internet.
- Ensure that the power supply is stable before starting the procedure and do not disconnect it during the procedure.

Red/Blue Display

If AVT 9480A mini dome cameras currently streaming video to a management software lose their connection to a mini dome camera, the corresponding display tile in the software will present a half red, half blue pattern.

The red/blue display is an indication of a bad mini dome camera or connection to the mini dome camera. It may also occur if the unit is under powered, if there is low voltage, or if the analof camera is not connected.

Using the Web Interface 3

You can access the AVT 9480A mini dome camera with a web browser for live viewing, Network, Serial Port and Video configuration.

Accessing the Web Interface

It is possible to access the web interface via the *Device Configurator* or directly via a web browser.

Note:

- *Only Internet Explorer is supported for accessing the mini dome camera via the web.*
- *Upon first access, a prompt for ActiveX installation may appear to enable viewing of live video.*

To access the Web interface via the Device Configurator

1. Start the *Device Configurator* by accessing the iSOC NVSM 5.3 AdminCenter and selecting **Pro Line A** in the Unified Configurator or by double-clicking the *Configurator.exe* file.
2. In the *Unit Management* pane, select the desired mini dome camera.
3. Right-click the desired mini dome camera, and then select **Web** or click on the Unit management toolbar.

   The web browser appears, displaying the home page of the mini dome camera.

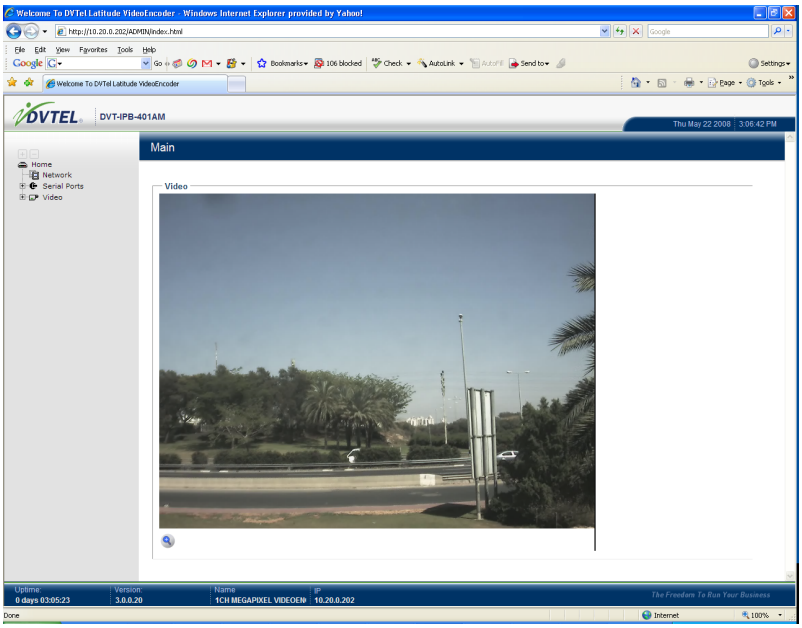


Figure 3-1: Web browser with mini dome camera home page

You can edit the network and video configuration of the mini dome camera.

To access the Web interface via a web browser

1. Start the Internet Explorer.
2. In your Internet Explorer window, enter the IP address of the device using the *http://IP_address* format.

   The web browser appears, displaying the home page of the mini dome camera.

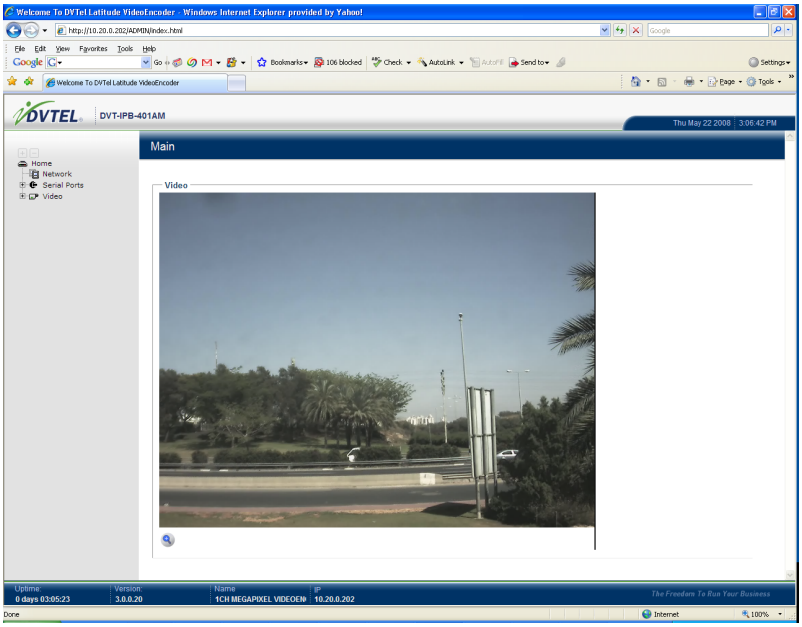


Figure 3-2: Web browser with mini dome camera home page

Note:

You may need to lower the security level in your web browser to be able to install the ActiveX component. If the component is not installed, you will not see any video.

Using the Web Interface

Using the web interface, you can view live video and set general, network configuration and video configuration parameters of the displayed mini dome camera.

Web Interface Workspace

The web interface consists of a navigation pane, video pane and configuration pane.

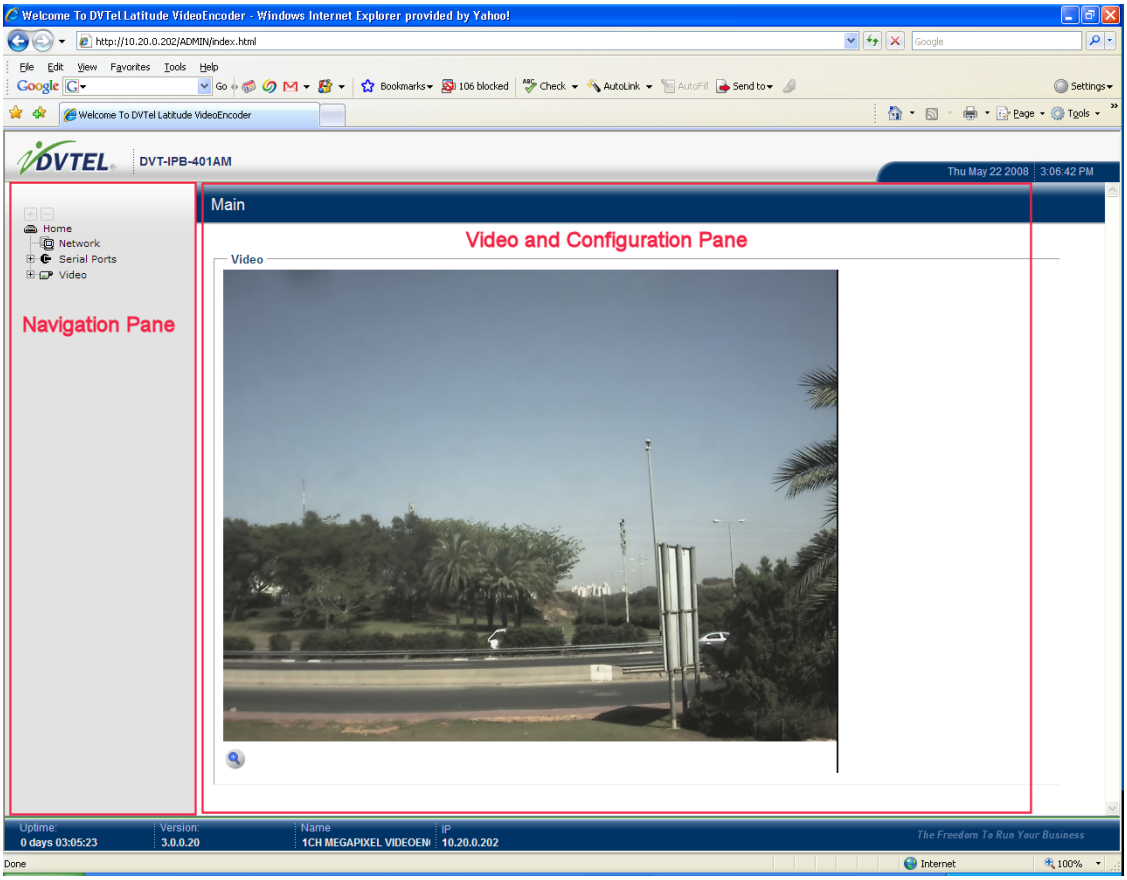


Figure 3-3: Web Interface Workspace

The following actions can be performed in the different panes:

- Navigation Pane — Access the Network Configuration and Video Configuration pages
- Video Pane — View live video (does not appear on every page)
- Configuration Pane — Set the displayed parameters (does not appear on every page)

Using the Digital Zoom

On the web pages providing the live video feed — the Home page and the Picture Profile web page — it is possible to zoom in and view a selected area close up with a digital zoom.

To use the digital zoom

1. On the Home page or the Picture Profile web page of the web interface, click the Zoom button located underneath the video feed.

   The *Zoom* dialog box appears.

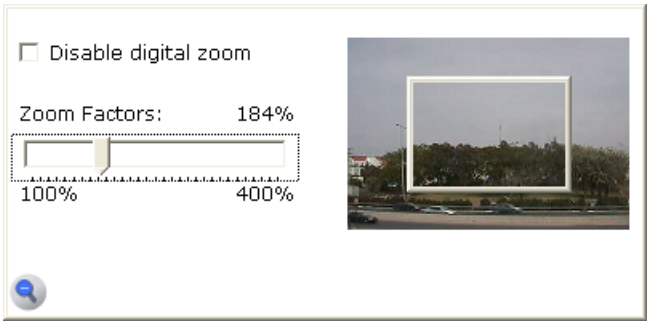


Figure 3-4: Digital Zoom dialog box

2. Clear the **Disable digital zoom** check box to enable the zoom.
3. Move the slider to the desired zoom level.

   A frame appears in the video display, displaying the zoom area.
4. Using the cursor, move the frame to the desired area.
5. To disable the digital zoom, select the **Disable digital zoom** check box.
6. To close the *Digital Zoom* dialog box, click the Zoom toggle button.

Setting Network Configuration Parameters

The network configuration parameters of the mini dome camera need to be set to ensure the compatibility with an existing network. The primary default IP address of the mini dome camera is created using the APIPA addressing scheme and is in the range 176.(a+16).bc.de, based upon the hex to decimal conversion of the MAC address of the individual device: *nn-nn-nn-na-bc-de*.

To set the Network configuration parameters

1. On the Home page of the web interface, go to the *Navigation* pane.
2. Click the *Network* branch on the *Navigation* tree.

   The *Network Configuration* page appears.

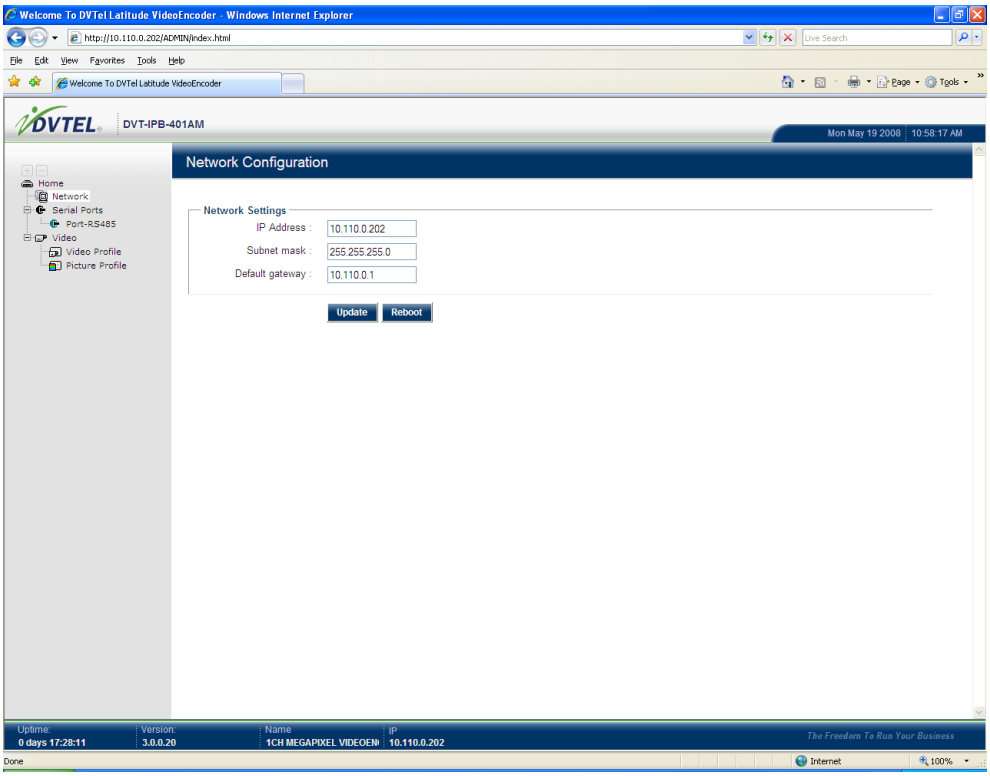


Figure 3-5: Network Configuration page

3. On the *Network Configuration* page of the web interface, set the following parameters:

Table 3-1: Network Configuration Parameters

Parameter	Description
IP address	The IP address of the mini dome camera
Subnet Mask	The subnet mask of the mini dome camera
Gateway IP	The gateway IP address of the mini dome camera

4. Click **Update** to change the parameters or **Reboot** to return to the default values.

   The mini dome camera will reset and the new network configuration parameters will appear.

Setting Serial Port Parameters

To set Serial Port parameters

1. In the Navigation pane, expand the Serial Ports branch, and then click the relevant serial port node.

   The *Serial Port* page appears.

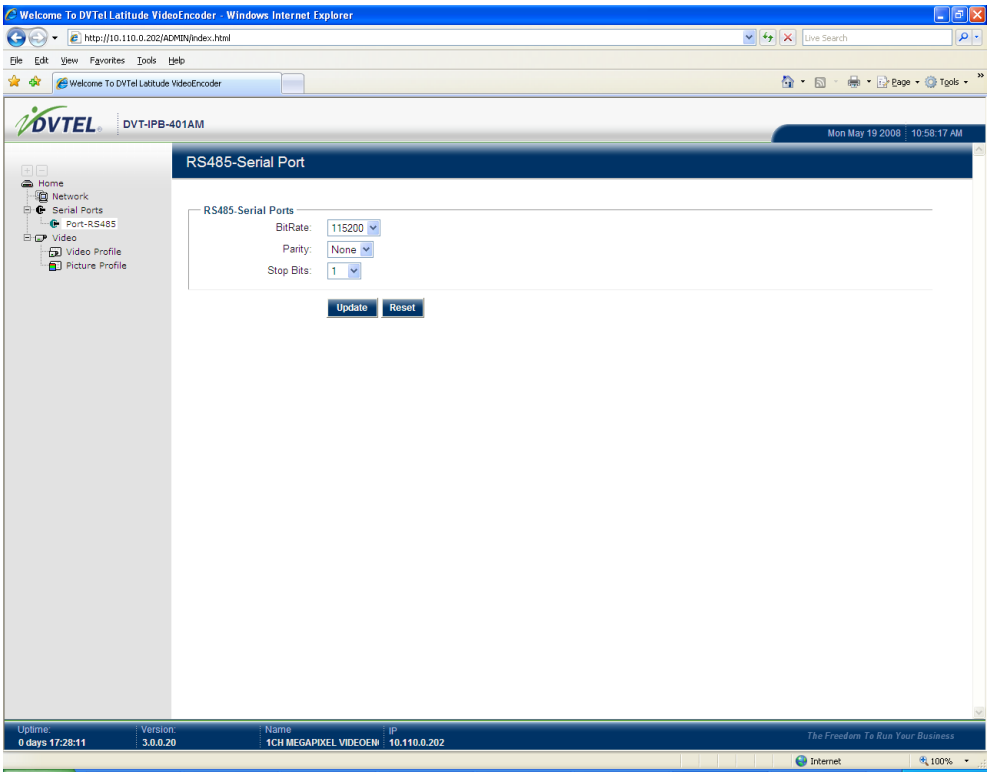


Figure 3-6: Serial Port page

2. On the *Serial Port* page of the web interface, set the following parameters:

   Table 3-2: Serial Port Parameters

Parameter	Description
Bit rate	The number of bits in transmitted data
Parity	Odd, even, or no parity check. Most communication devices do not use parity.
Stop bits	The number of stop bits in each transmission

3. Click **Update** to change the parameters or **Reset** to return to the default values.

Setting Video Profile Parameters

Set the video profile parameters.

To set the Video Profile parameters

1. On the Home page of the web interface, go to the *Navigation* pane.
2. Expand the *Video* branch of the *Navigation* tree, and then select **Video Profile**.

   The *Video Profile* page appears.

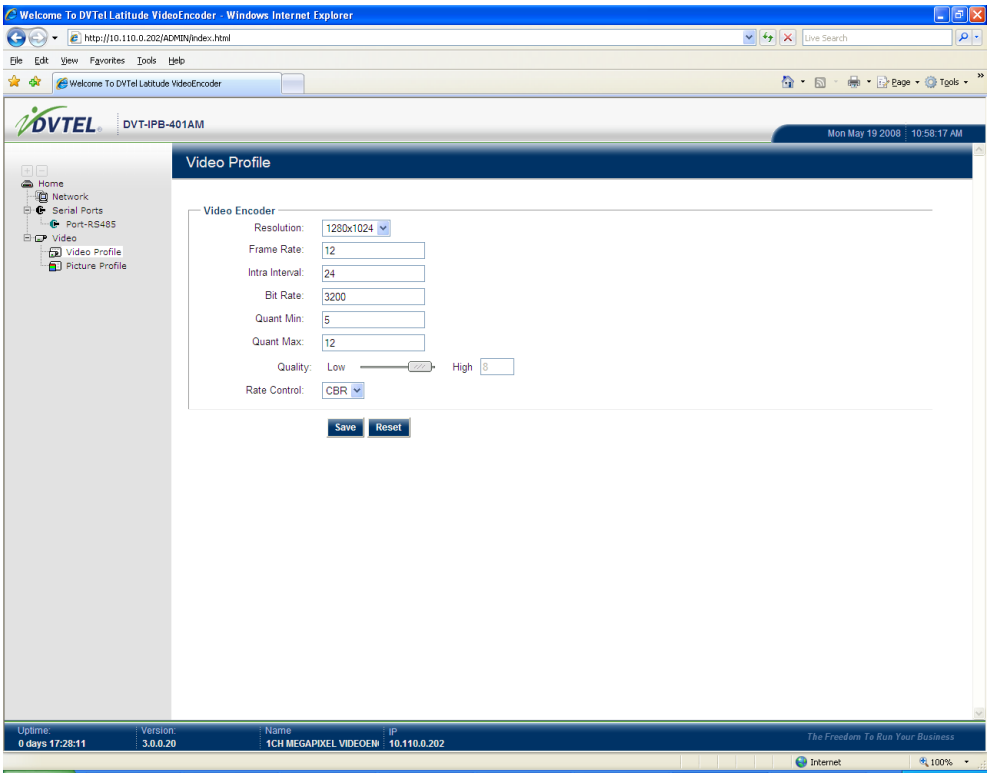


Figure 3-7: Video Profile page

3. Set the following parameters:

Table 3-3: Video Profile Parameters

Parameter	Description
Video Encoder	
Resolution	The measure of how clear and crisp the video image appears. Each resolution corresponds to a specific number of pixels (columns * lines) for each picture of the video sequence.
Frame Rate	The maximum number of frames per seconds (fps) that will be encoded and transferred by the transmitter. This parameter can be set from 1 to 30 fps.

Table 3-3: Video Profile Parameters

Parameter	Description
Intra Interval	The frequency at which a complete video frame (called I-frame) is sent by the encoder. Possible values are in the 0–100 range. A value of 0 indicates that no I-frame will be sent automatically by the device; a value of X means that a complete image refresh will occur every X frames.
Bit Rate	The maximum number of bits per second generated by the device. Valid bit rates range from 32 to 6000 kbps
Quant Min	A parameter related to video quality. A higher quantizer value means less video quality but less bit rate, and vice versa. The value range is from 2 to 31.
Quant Max	A parameter related to video quality. A higher quantizer value means less video quality but less bit rate, and vice versa. The value range is from 2 to 31.
Quality	The quality of the video profile. Use the slider to adjust it to the desired quality level.
Rate Control	The mode controlling the bit rate variation. The available modes are: • CBR — The Constant Bit Rate mode is the most effective to maintain the target bit rate. Video quality may suffer and the frame rate may decrease. This mode should be used when transmitting video over networks that have very limited bandwidths, and with an intra interval value of 0. • CFR — The Constant Frame Rate mode maintains the target frame rate. Video quality may suffer and the bit rate may exceed the target value. • VBR — The Variable Bit Rate. In this mode, data is not sent evenly. (The rate control is disabled and the current bit rate is a function of VBRQ and therefore the bit rate can changes dramatically based on the video content.)

4. Click **Save** to change the parameters or **Reset** to return to the default values.

Setting Picture Profile Parameters

Set the picture profile parameters.

To set the Picture Profile parameters

1. On the Home page of the web interface, go to the *Navigation* pane.
2. Expand the *Video* branch of the *Navigation* tree, and then select **Picture Profile**.

   The *Picture Profile* page appears.

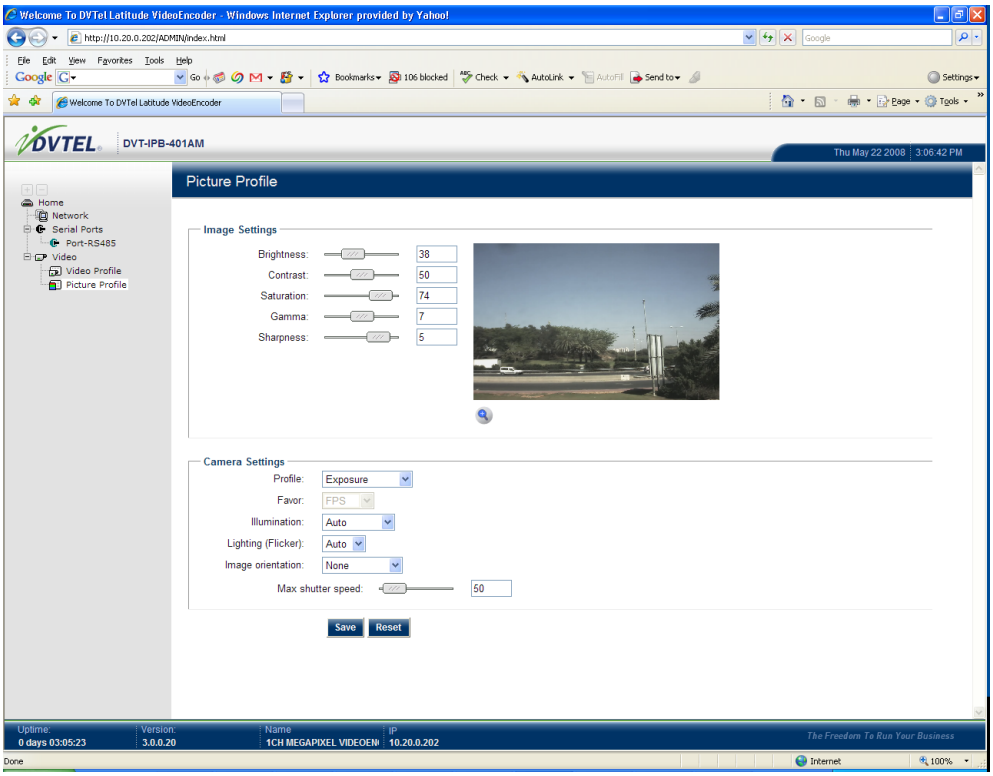


Figure 3-8: Picture Profile page

3. Set the following parameters:

Table 3-4: Picture Profile Parameters

Parameter	Description
Image Settings	
Brightness	The total amount of light in a color — Possible values range from 0-100
Contrast	The range of colors in the image — Possible values range from 0-100
Saturation	The intensity of the colors in the image — Possible values range from 0-100
Gamma	The gamma correction of the image — Possible values range from 2-12
Sharpness	The sharpness of the image — Possible values range from 0-7
Camera Settings	
Profile	The profile preset — Exposure, Day mode, Night mode, Quality versus FPS

Table 3-4: Picture Profile Parameters

Parameter	Description
Favor	Quality versus FPS or FPS. Not relevant when selecting the Exposure profile
Illumination	The illumination preset — Auto, Outdoor, Indoor, Mixed, Fluorescent
Lighting (Flicker)	Automatic flicker detection
Image orientation	The picture direction
Max shutter speed	The maximum shutter speed. Only relevant when selecting the Exposure profile.

4. Click **Save** to change the parameters or **Reset** to return to the default values.

Using the CLI 4

You can access the command line interface (CLI) of the supported mini dome camera to perform more extensive configurations of the mini dome camera. The CLI is hierarchically organized, with menus, sub-menus, and individual options representing configuration parameters.

You access the CLI through Telnet.

Accessing the CLI

It is possible to access the CLI via the *Device Configurator* or directly via Telnet.

To access the CLI via the Device Configurator

1. Start the *Device Configurator* by accessing the iSOC NVSM 5.3 AdminCenter and selecting **Pro Line A** in the Unified Configurator or by double-clicking the *Configurator.exe* file.
2. In the *Unit Management* pane, select the desired edge device.
3. Right-click the desired mini dome camera, and then select **Telnet** or click on the Unit management toolbar.

   The Telnet terminal appears.

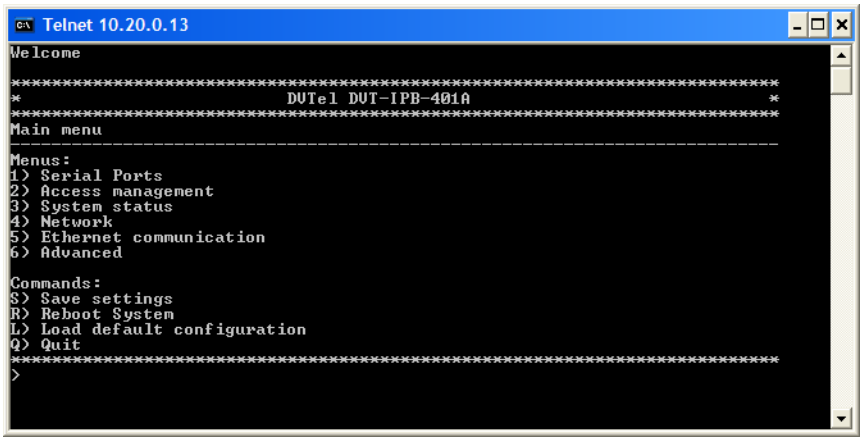


Figure 4-1: Telnet terminal

Using the Telnet terminal, you can access and edit all configuration parameters of the mini dome camera.

To access the CLI via the Telnet terminal

- Using Microsoft Telnet, click **Start**—**Run**. In the command line, enter **telnet <host name>** (where host name is the IP address of the device), and press ENTER.
- Using the Unix / Linux Telnet, at the prompt enter **telnet <host name>** (where host name is the IP address of the device).

  The Telnet terminal appears.

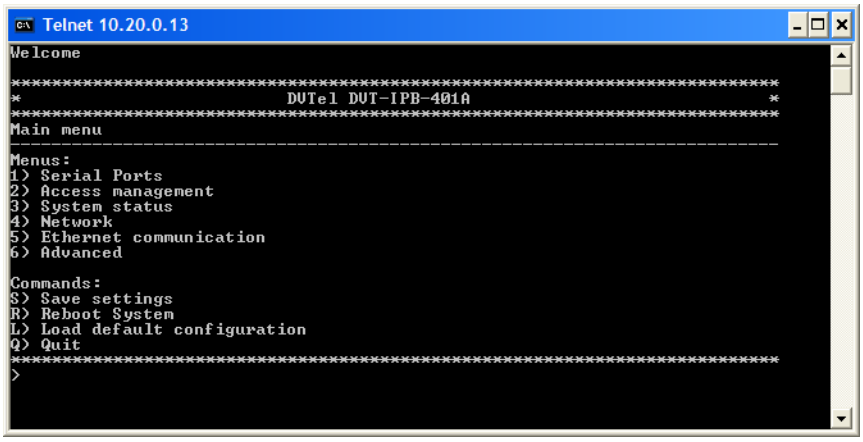


Figure 4-2: Telnet terminal

Using the Telnet terminal, you can access and edit all configuration parameters of the mini dome camera.

Using the CLI

Using the CLI, you can configure the following parameters of the displayed mini dome camera:

- ***Setting Serial Port Parameters***
- ***Setting the Access Management Parameters***
- ***Setting the System Status Parameters***
- ***Setting Network Parameters***
- ***Setting the Ethernet Communication Parameters***
- ***Setting Advanced Parameters*** — Video, Video Status, Serial Port Status, VSIP, VSIP Statistics, Audio, Test and Debug, Outputs Control, System Time, System Time Stats

Note:

The CLI has a time out that is triggered after three minutes of inactivity. When the time out occurs, you lose access to the command line and the Telnet terminal closes automatically.

To work with the CLI menu structure

- To execute a command or open a menu, type in the corresponding letter or number, then press ENTER.
- To return to the previous menu, type **p**.
- To save the settings, type **s** at the main menu, then press ENTER.
- To reboot the system, type **r** and then press ENTER.
- To load the default configuration of the system, type **l** and then press ENTER.
- To end the CLI work session, save your settings first. Next, type **q** at the main menu and press ENTER. Depending on the changed settings, the device may perform a soft boot.

Setting Serial Port Parameters

The AVT 9480A mini dome camera supports the RS-232 and the RS-422/485 asynchronous protocols. Using the CLI, you can select the desired protocol for the serial port and set its parameters.

To set Serial Port parameters

1. On the Telnet main page, type **1** and press ENTER to select *Serial Ports*.
2. Select the desired protocol:
   - To select *RS232*, type **1**, and press ENTER.
   - To select *RS422/485*, type **2**, and press ENTER.
3. Set the following parameters by selecting the respective menu number and pressing ENTER:

Table 4-1: Serial Port Parameters

Menu	Parameter	Description
1	Bit rate	The data rate that the serial equipment operates at. Possible values range from 1200 bps to 230,400 bps (transmitters) or to 115,200 bps (receivers).
2	Parity	Odd, even, or no parity check. Most communication devices do not use parity.
3	Stop bits	The number of stop bits in each transmission
4	Data bits	The number of bits in transmitted data

4. For each parameter, enter the desired value, and press ENTER.
5. When the desired parameters are modified, type **p** and press ENTER repeatedly until you reach the main menu.
6. Type **s** and press ENTER to save the changed settings.

Setting the Access Management Parameters

Via the *Access management* menu, you can define user accounts and device security.

- **User Accounts** — By defining user accounts, you can protect the configuration of the device by restricting its access with a user name and a password. Once the user account mode is activated, you need the user name/password combination to access the web interface of the device. There are two types of users — Administrator and Web Client. The administrator has all rights and is automatically available when user accounts are activated. The web client only has access to live video and the web interface. Three web clients are available.
- **Security** — When defining device security, you determine whether or not HTTP access is enabled. If HTTP access is disabled, you can only set up the device via the *Device Configurator* or Telnet.

By default, access management is disabled and administrator privileges are granted to Telnet and Web users. Access management is activated via the Telnet interface.

To set Access management parameters

1. On the Telnet main page, type **2** and press ENTER to select *Access Management*.
2. Type **1** and press ENTER to select *Security*.
3. Type **1** and press ENTER to select *HTTP Access*.
4. Select the desired option:
   - Type **1** and press ENTER to select **Enabled**.
   - Type **2** and press ENTER to select **Disabled**.
5. When the desired option is selected, type **p** and press ENTER to go to the previous menu.
6. Type **2** and press ENTER to display the *User Account* menu.
7. Select the desired option:
   - Type **1** and press ENTER to select **Enabled**.
   - Type **2** and press ENTER to select **Disabled**.
8. When **Enabled** is selected, the *Manage User Account* menu is displayed.
9. Set the following parameters by selecting the respective menu number and pressing ENTER:

Table 4-2: User Account Parameters

Menu	Parameter	Description
1	Admin user name	Enter the new parameter value and press ENTER.
2	Admin password	Enter the new parameter value and press ENTER.
3	Web client 1 user name	Enter the new parameter value and press ENTER.
4	Web client 1 password	Enter the new parameter value and press ENTER.
5	Web client 1 enable	• Type **1** and press ENTER to select **Enabled**. • Type **2** and press ENTER to select **Disabled**.

Table 4-2: User Account Parameters

Menu	Parameter	Description
6	Web client 2 user name	Enter the new parameter value and press ENTER.
7	Web client 2 password	Enter the new parameter value and press ENTER.
8	Web client 2 enable	• Type **1** and press ENTER to select **Enabled**. • Type **2** and press ENTER to select **Disabled**.
9	Web client 3 user name	Enter the new parameter value and press ENTER.
10	Web client 3 password	Enter the new parameter value and press ENTER.
11	Web client 3 enable	• Type **1** and press ENTER to select **Enabled**. • Type **2** and press ENTER to select **Disabled**.

10. For each parameter, enter the desired value, and press ENTER.
11. When the desired option is selected, type **p** and press ENTER repeatedly until you reach the main menu.
12. Type **s** and press ENTER to save the changed settings.

Setting the System Status Parameters

The system status information indicates the current values of internal device parameters. Via this menu, you can view system and storage parameters as well as to set the board temperature parameters.

To set System status parameters

1. On the Telnet main page, type **3** and press ENTER to select *System status*.

   The following *System status* parameters are displayed:

   — Firmware Version
   — Mpeg-4 Version
   — Build Date
   — CPU Info
   — Up time
   — CPU Load
   — Boot loader version
   — CPLD version
2. Type **2** and press ENTER to display the *Board Temperature* menu.

3. Set the following parameters by selecting the respective menu number and pressing ENTER:

Table 4-3: Board Temperature Parameters

Menu	Parameter	Description
1	Critical high temperature limit	Enter the new parameter value and press ENTER.
2	High temperature limit	Enter the new parameter value and press ENTER.
3	Low temperature limit	Enter the new parameter value and press ENTER.
4	Critical low temperature limit	Enter the new parameter value and press ENTER.

4. For each parameter, enter the desired value, and press ENTER.
5. When the desired option is selected, type **p** and press ENTER repeatedly until you reach the main menu.
6. Type **s** and press ENTER to save the changed settings.

Setting Network Parameters

The network configuration parameters of the mini dome camera need to be set to ensure the compatibility with an existing network. The primary default IP address of the mini dome camera is created using the APIPA addressing scheme and is in the range 176.(a+16).bc.de, based upon the hex to decimal conversion of the MAC address of the individual device: *nn-nn-nn-na-bc-de*. Using the CLI, you can configure additional network parameters.

To set the Network parameters

1. On the Telnet main page, type **4** and press ENTER to select *Network*.
2. Set the following parameters by selecting the respective menu number and pressing ENTER:

Table 4-4: Network Parameters

Menu	Parameter	Description
1	DHCP Configuration	The use of DHCP (Dynamic Host Configuration protocol) to automatically get a valid network configuration for the device from a server. You can set this option only if the device is connected to a network that uses a DHCP server. • **Enabled** — type **1** and press ENTER • **Disabled** — type **2** and press ENTER
2	Local IP Address	The IP address of the mini dome camera
3	Subnet Mask	The subnet mask of the mini dome camera
4	Gateway	The gateway IP address of the mini dome camera
5	DNS Server Address	The primary DNS server address
7	Host Name	The Host name of the edge device

Table 4-4: Network Parameters

Menu	Parameter	Description
8	Ping Request Target	The IP address of the Ping target
9	Ping Request Send Buffer Size	The size of the ping packet
	Domain Name	The name of the domain in which the mini dome camera resides. This parameter is fixed.

3. For each parameter, enter the desired value, and press ENTER.
4. When the desired option is selected, type **p** and press ENTER repeatedly until you reach the main menu.
5. Type **s** and press ENTER to save the changed settings.

Setting the Ethernet Communication Parameters

Via the *Ethernet communication* menu, you can display the NIC MAC address and set the 802.3 physical mode parameter. IEEE 802.3 is a collection of IEEE standards defining the physical layer, and the media access control (MAC) sublayer of the data link layer, of wired Ethernet.

To set the Physical Mode parameters

1. On the Telnet main page, type **5** and press ENTER to select *Ethernet communication*.

   The NIC MAC address of the mini dome camera is displayed.
2. Type **1** and press ENTER to select *802.3 Physical Mode*.
3. Select the following value of the parameter by selecting the respective menu number and pressing ENTER:

Table 4-5: 802.3 Physical Mode Parameters

Menu	Parameter Value
1	Auto
2	100 Mb/s Full Duplex
3	10 Mb/s Full Duplex
4	100 Mb/s Half Duplex
5	10 Mb/s Half Duplex

4. When the desired parameter value is selected, type **p** and press ENTER repeatedly until you reach the main menu.
5. Type **s** and press ENTER to save the changed settings.

Setting Advanced Parameters

Using the *Advanced* menu, you can view or set the following parameters: Video, Video Status, Serial Port Status, VSIP, VSIP Statistics, Audio, Test and Debug, Outputs Control, System Time, System Time Stats.

To access the Advanced menu

1. On the Telnet main page, type **6** and press ENTER to select *Advanced*.
2. Select the following submenus by selecting the respective menu number and pressing ENTER:

   Table 4-6: Advanced Submenus

Menu	Parameter	Description
1	Video	Set the video input and video standard parameters
2	Video Status	View the status of encoder 1 and 2
3	Serial Port Status	View the serial port status
4	VSIP	Set the VSIP parameters
5	VSIP Statistics	View the VSIP statistics
6	Audio	View and set audio input and output parameters
7	Test and Debug	View the debug log — internal use only
8	Outputs Control	Set the outputs control parameters
9	System Time	Set the local time and the NTP Server parameters
10	System Time Stats	View the system time statistics
11	HTTP	Set the HTTP parameters
12	Quality of Service	Set the Quality of Service parameters

   To view how to set the parameters of the submenus, go to the respective procedure.
3. When the desired option is selected, type **p** and press ENTER repeatedly until you reach the main menu.
4. Type **s** and press ENTER to save the changed settings.

To set the Video menu parameters

1. From the *Advanced* menu, type **1** and press ENTER to select *Video*.
2. To display the *Video Input* parameters, type **1** and press ENTER.

   You can select one of the following submenus: *Encoder 1, Encoder 2, Primary Resolution* and *Sensor Settings*. Once you are done setting the parameters of the selected submenu, type **p** to return to the *Video Input* menu.
3. To display the *Encoder 1* or *Encoder 2* parameters, type **1** or **2**, respectively, and press ENTER.

The parameters of Encoder 1 and 2 are identical.

4. Select the following *Encoder* parameters by selecting the respective menu number and pressing ENTER:

Table 4-7: Encoder Parameters

Menu	Parameter	Description
1	Target Bit Rate	The maximum number of bits per second generated by the device. Valid bit rates range from 9 to 6000 kbps. Enter the new target bit rate and press ENTER.
2	Target Frame Rate	The maximum number of frames per seconds (fps) that will be encoded and transferred by the transmitter. Enter the new target frame rate and press ENTER.
3	Minimum Quantizer	A parameter related to video quality. A higher quantizer value means less video quality but less bit rate, and vice versa. The value range is from 2 to 31. Enter the new parameter value and press ENTER.
4	Maximum Quantizer	A parameter related to video quality. A higher quantizer value means less video quality but less bit rate, and vice versa. The value range is from 2 to 31. Enter the new parameter value and press ENTER.
5	VBR Quantizer	A parameter related to variable bit rate. Enter the new parameter value and press ENTER.
6	Resolution	The measure of how clear and crisp the video image appears. Each resolution corresponds to a specific number of pixels (columns * lines) for each picture of the video sequence. Enter the new parameter value and press ENTER.
7	Rate Control Mode	The mode controlling the bit rate variation. The available modes are: • CBR —The Constant Bit Rate mode is the most effective to maintain the target bit rate. May drop frames rates to maintain the bit rate. • CFR —The Constant Frame Rate mode maintains the target frame rate. Bit rate may exceed the target value. • VBR — The Variable Bit Rate and no limitation on bit rate Enter the new parameter value and press ENTER.
8	Intra Interval	The frequency at which a complete video frame (called I-frame) is sent by the encoder. Possible values are in the 1–100 range. Enter the new parameter value and press ENTER.
9	Intra Refresh	Enabling the refreshing of video frames to speed up recovery from error. • **Enabled —** type 1 and press ENTER • **Disabled** — type **2** and press ENTER
	Compression Mode	Displays the compression mode used (MPEG-4 Compliant Simple Profile—The MPEG-4 ISO 14496-2 compliant mode)

Table 4-7: Encoder Parameters

Menu	Parameter	Description
10	Initial Streaming	• **Enabled —** type **1** and press ENTER • **Disabled** — type **2** and press ENTER
11	Current Streaming State	• **Enabled** — type **1** and press ENTER • **Disabled** — type **2** and press ENTER
	Transport Protocol	Displays the transport protocol used (only RTP/UDP is supported)
12	Remote IP Address	The video stream destination IP
13	UDP Data Port	The video stream destination IP
14	Max Video Payload Size	Enter the new maximum payload size (ranging from 100 to 1400)
15	Using MPEG-4 H/W decoder	• **Enabled —** type **1** and press ENTER • **Disabled** — type **2** and press ENTER
16	Energy vector (EV) transmission rate	• **Enabled —** type **1** and press ENTER • **Disabled** — type **2** and press ENTER

5. When the desired option is selected, type **p** and press ENTER repeatedly until you reach the *Video Input* menu.
6. To display the *Primary Resolution* parameters, type **3** and press ENTER.
7. Select the following submenus by selecting the respective menu number and pressing ENTER:

Table 4-8: Primary Resolution Submenus

Menu	Parameter
1	SXGA (1280x1024)
2	XGA (800x608)
3	VGA (640x512)

8. When the desired option is selected, type **p** and press ENTER repeatedly until you reach the *Video Input* menu.
9. To display the *Sensor Settings* parameters, type **4** and press ENTER.

10. Select the following submenus by selecting the respective menu number and pressing ENTER:

Table 4-9: Sensor Settings Submenus

Menu	Parameter	Description
1	Profile	Select the desired profile preset of the Mega Pixel camera: • **Exposure —** type **1** and press ENTER. Free control of IR filter and exposure time. If the IR filter is off, the mode is B/W. If the color mode is B/W, the IR filter is off. • **Day mode** — type **2** and press ENTER. Color Mode and IR filter are ON • **Night mode** — type **3** and press ENTER. Black and White and IR filter are OFF. • **Quality versus FPS** — type **4** and press ENTER. Free control of IR filter and exposure time. If the IR filter is off, the mode is B/W. If the color mode is B/W, the IR filter is off.
2	Illumination	Select the desired illumination preset of the Mega Pixel camera: • **Auto —** type **1** and press ENTER • **Indoor** — type **2** and press ENTER • **Outdoor** — type **3** and press ENTER • **Mixed** — type **4** and press ENTER • **Fluorescent** — type **5** and press ENTER
3	Orientation	Select the desired orientation setting of the Mega Pixel camera: • **None —** type **1** and press ENTER • **Flip horizontal** (**Mirror)**— type **2** and press ENTER • **Flip vertical** — type **3** and press ENTER • **180 Rotate** — type **4** and press ENTER
4	Exposure settings	Select the desired exposure setting of the Mega Pixel camera: • **Max shutter speed —** type **1** and press ENTER. Enter the new parameter value and press ENTER. Possible values range from 0-240 msec; where 0 means automatic. • **Backlight compensation** — type **2** and press ENTER. Possible values are Auto (default), Center, Center spot, Upper, Lower, Right, Down, Right upper quarter, Right lower quarter, Left upper quarter, Left lower quarter • **Auto Flicker detection** — type **3** and press ENTER. Enter the new parameter value and press ENTER. Possible values are 50/60 Hz or automatic.

Table 4-9: Sensor Settings Submenus

Menu	Parameter	Description
5	Picture settings	Select the desired picture setting of the Mega Pixel camera: • **Brightness—** type **1** and press ENTER. Enter the new parameter value and press ENTER. Possible values range from 128 to 127, where -128 is dark and 127 is bright. • **Contrast—** type **2** and press ENTER. Enter the new parameter value and press ENTER. Possible values range from 128 to 127, where 128 is luminance off and 127 is the maximum. • **Saturation—** type **3** and press ENTER. Enter the new parameter value and press ENTER. Possible values range from 128 to 127, where 128 is color off and 127 is the maximum. • **Sharpness—** type **4** and press ENTER. Enter the new parameter value and press ENTER. Possible values range from 0 to 7. • **Gamma correction—** type **5** and press ENTER. Enter the new parameter value and press ENTER. Possible values range from 2 to 12. • **Black level shifting —** type **6** and press ENTER. Enter the new parameter value and press ENTER. Possible values range from 1 to 16.
6	Noise reduction	Select the desired noise reduction setting of the Mega Pixel camera: • **Disable—** type **1** and press ENTER. • **Static—** type **2** and press ENTER. • **Advanced—** type **3** and press ENTER. Enter the new parameter value and press ENTER. Possible values are Low, Medium and High.
7	I.R. cut filter	• **Enabled —** type **1** and press ENTER • **Disabled —** type **2** and press ENTER
8	Iris control	• **Disabled —** type **1** and press ENTER • **Auto —** type **2** and press ENTER

11. When the desired option is selected, type **p** and press ENTER repeatedly until you reach the *Video Input* menu.
12. Type **s** and press ENTER to save the changed settings.

To set the Video Status menu parameters

1. From the *Advanced* menu, type **2** and press ENTER to select *Video Status*.

   You can select one of the following submenus: *Encoder 1 Status* or *Encoder 2 Status.* Once you are done viewing the parameters of the selected submenu, type **p** to return to the *Video Status* menu.
2. To display the *Encoder 1 Status* parameters, type **1** and press ENTER.
3. To display the *Encoder 2 Status* parameters, type **2** and press ENTER.

   The following *Video Status* parameters are displayed for both submenus:

- Current Frame Rate
- Current Bit Rate (CB/s)
- Average Frame Rate
- Average Bit Rate (CB/s)
- Total Frames
- Total KB
- Total I-Frame Requests
- Total Frames Skipped
- Video Input Locked

4. Type **R** and press ENTER to reset the statistics.
5. When the desired option is selected, type **p** and press ENTER repeatedly until you reach the main menu.
6. Type **s** and press ENTER to save the changed settings.

To set the Serial Port Status parameters

1. From the *Advanced* menu, type **3** and press ENTER to select *Serial Port Status*.

   You can select one of the following submenus: *RS232* or *RS422/485.* Once you are done viewing the parameters of the selected submenu, type p to return to the *Serial Port Status*. menu.
2. To display the *RS232* parameters, type **1** and press ENTER.
3. To display the *RS422/485* parameters, type **2** and press ENTER.

   The following *Serial Port Status* parameters are displayed for both protocols:
   - Line Driver
   - Bytes Sent
   - Bytes Received
4. Type **R** and press ENTER to reset the statistics.
5. When the desired option is selected, type **p** and press ENTER repeatedly until you reach the main menu.
6. Type **s** and press ENTER to save the changed settings.

To set the VSIP menu parameters

1. From the *Advanced* menu, type **4** and press ENTER to select *VSIP*.
2. Select the following parameters by typing the respective menu number and pressing ENTER:

Table 4-10: VSIP Parameters

Menu	Parameter	Description
1	VSIP Port	The communication port used by the device for discovery. Enter the new VSIP port and press ENTER

Table 4-10: VSIP Parameters

Menu	Parameter	Description
2	VSIP Multicast IP Address	The IP address used by the device to listen for VSIP queries. Enter the new VSIP Multicast IP address and press ENTER
3	VSIP Discovery IP Address	The IP address used by the device to make its presence known with the broadcast method. Enter the new VSIP Discovery IP address and press ENTER.
4	VSIP TCP Listening State	• **Enabled** — type **1** and press ENTER • **Disabled** — type **2** and press ENTER
5	VSIP Discovery State	• **Enabled** — type **1** and press ENTER • **Disabled** — type **2** and press ENTER
6	VSIP Unit Name	The name of the device Enter the new VSIP unit name and press ENTER.
7	VSIP TCP Heartbeat	• **Enabled** — type **1** and press ENTER • **Disabled** — type **2** and press ENTER
8	Unique Set Identifier	Enter the unique ID and press ENTER
9	VSIP Event Monitor IP Address	Destination IP where alarms will be sent
10	VSIP Event Monitor Port	Destination port where alarms will be sent
11	VSIP Event Monitor TCP State	How to send the alarms, TCP or UDP
12	VSIP Event Monitor GUID	Enter the new Event Monitor GUID and press ENTER

3. When the desired option is selected, type **p** and press ENTER repeatedly until you reach the main menu.
4. Type **s** and press ENTER to save the changed settings.

To view and reset the VSIP Statistics menu parameters

1. From the *Advanced* menu, type **5** and press ENTER to select *VSIP Statistics*.
2. The following system VSIP statistics parameters are displayed:
   - Current TCP Connection Count
   - Total TCP Inactive Connections Closed
   - Total TCP Connections Lost
   - Total TCP Heartbeats Sent
3. Type **1** and press ENTER to reset the statistics.
4. When the desired option is selected, type **p** and press ENTER repeatedly until you reach the main menu.
5. Type **s** and press ENTER to save the changed settings.

To set the Audio menu parameters

1. From the *Advanced* menu, type **6** and press ENTER to select *Audio*.

   You can select one of the following submenus: *Audio Output, Audio Input, Input Compression* or *Sample Rate.* Once you are done setting the parameters of the selected submenu, type p to return to the *Audio* menu.

2. To set the *Audio Output* parameters, type **1** and press ENTER.

   — Select the following parameters by typing the respective menu number and pressing ENTER:

Table 4-11: Audio Output Parameters

Menu	Parameter	Description
1	UDP Data Port	Destination port where audio is sent
2	Remote IP Address	Enter the new remote IP address of the input source and press ENTER
3	Initial Streaming	• **Enabled** — type **1** and press ENTER • **Disabled** — type **2** and press ENTER
4	Current Streaming State	• **Enabled** — type **1** and press ENTER • **Disabled** — type **2** and press ENTER
	Packets Received	Displays the number of packets received
	Bytes Received	Displays the number of bytes received
	Transport Protocol	Displays the transport protocol used
R	Reset Statistics	Type **r** and press ENTER to reset the statistics

3. To set the *Audio Input* parameters, type **2** and press ENTER.

   — Select the following parameters by typing the respective menu number and pressing ENTER:

Table 4-12: Audio Input Parameters

Menu	Parameter	Description
1	UDP Data Port	The port where incoming audio packets will be received
2	Remote IP Address	Enter the new remote IP address of the audio output target and press ENTER
3	Initial Streaming	• **Enabled** — type **1** and press ENTER • **Disabled** — type **2** and press ENTER
4	Current Streaming State	• **Enabled** — type **1** and press ENTER • **Disabled** — type **2** and press ENTER
5	Input Type	Select the desired input type of the audio source: • **Line-in —** type **1** and press ENTER • **Microphone** — type **2** and press ENTER

Table 4-12: Audio Input Parameters

Menu	Parameter	Description
6	Gain	Enter the new value of the gain control (for the volume - ranging from 0 to 1000) and press ENTER
	Transport Protocol	Displays the transport protocol used for the mini dome camera (only UDP/RTP supported)

4. To set the *Input Compression* parameter, type **3** and press ENTER.
   - Type **1** and press ENTER to set the parameter to **PCM**.
   - Type **2** and press ENTER to set the parameter to **uLaw**.
5. To set the *Sample Rate* parameter, type **4** and press ENTER.
   - Type **1** and press ENTER to set the parameter to **8 kHz**.
   - Type **2** and press ENTER to set the parameter to **32 kHz**.
6. When the desired option is selected, type **p** and press ENTER repeatedly until you reach the main menu.
7. Type **s** and press ENTER to save the changed settings.

To view the Test and Debug menu parameters

1. From the *Advanced* menu, type **7** and press ENTER to select *Test and Debug*.
2. Type **1** and press ENTER to view the *Debug log* menu.

   This menu is for internal use only and is password protected.
3. Type **p** and press ENTER repeatedly until you reach the main menu.

To set the Outputs Control menu parameters

1. From the *Advanced* menu, type **8** and press ENTER to select *Outputs Control*.
2. Type **1** and press ENTER to set the *Relay* parameter.
   - Type **1** and press ENTER to set the parameter to **ON**.
   - Type **2** and press ENTER to set the parameter to **OFF**.
3. When the desired option is selected, type **p** and press ENTER repeatedly until you reach the main menu.
4. Type **s** and press ENTER to save the changed settings.

To set the System Time menu parameters

1. From the *Advanced* menu, type **9** and press ENTER to select *System Time*.

2. Select the following parameters by typing the respective menu number and pressing ENTER:

Table 4-13: System Time Parameters

Menu	Parameter	Description
1	NTP Server Usage	The use of the Network Time Protocol (NTP) to get the current time. NTP uses GMT to synchronize device clock time. • **Enabled —** type **1** and press ENTER • **Disabled** — type **2** and press ENTER
2	NTP Server IP Address	The IP address of the NTP server from which the device will get the current time. Enter the new NTP server IP address and press ENTER
3	NTP Server IP Port	The IP port of the NTP server. Enter the new NTP server IP port (ranging from 1 to 65535) and press ENTER
4	NTP Server Poll Period	Enter the new NTP Polling Period (in seconds, ranging from 10 to 1000) and press ENTER
	UTC Time	Displays the current universal time and date
5	Local Time Offset	Displays the offset in minutes from the GMT time in the current time zone
	Local Time	Displays the current local time

3. When the desired option is selected, type **p** and press ENTER repeatedly until you reach the main menu.
4. Type **s** and press ENTER to save the changed settings.

To view and reset the System Time Stats menu parameters

1. From the *Advanced* menu, type **10** and press ENTER to select *System Time Stats*.
2. The following system time statistics parameters are displayed:
   - NTP Client Sync State — This parameter can either be **synchronized** or **not synchronized**.
   - NTP last update — This parameter can either be **synchronized** or **not synchronized**.
3. Type **1** and press ENTER to reset the statistics.
4. When the desired option is selected, type **p** and press ENTER repeatedly until you reach the main menu.
5. Type **s** and press ENTER to save the changed settings.

To set the HTTP parameters

1. From the *Advanced* menu, type **11** and press ENTER to select *HTTP*.
2. The following HTTP parameters are displayed:

- HTTP Server IP Port — This parameter can be set to the desired IP port.
- HTTP PTZ Controls — This parameter can either be **enabled** or **disabled**.

3. When the desired option is selected, type **p** and press ENTER repeatedly until you reach the main menu.
4. Type **s** and press ENTER to save the changed settings.

To set the Quality of Service parameters

1. From the *Advanced* menu, type **12** and press ENTER to select *Quality of Service*.
2. The following Quality of Service parameters are displayed:
   - Type of QoS — This parameter can either be **none, TOS** or **DSCP**.
   - Video Data Priority — This parameter can either be **Routine, Low, Medium, High** or **Critical** (when TOS is selected) or range from 0-63 (when DSCP is selected).
   - Audio Data Priority — This parameter can either be **Routine, Low, Medium, High** or **Critical** (when TOS is selected) or range from 0-63 (when DSCP is selected).
   - Control Data Priority — This parameter can either be **Routine, Low, Medium, High** or **Critical** (when TOS is selected) or range from 0-63 (when DSCP is selected).
3. When the desired option is selected, type **p** and press ENTER repeatedly until you reach the main menu.
4. Type **s** and press ENTER to save the changed settings.

Factory Default Configuration A

The AVT 9480A is programmed at the factory with the following configuration:

Table A-1: Factory Default Configuration

Type	Configuration
Serial port	• Bit rate: 1000 bauds • Data bits: 8 • Parity: none • Stop bit: 1 • RS-422/485 operating mode: RS-422 4-wire
Access management	• Telnet sessions: Enabled • IP firmware update: Enabled
Network	• DHCP configuration: Disabled • IP address: 176.(a+16).bc.de (based upon the hex to decimal conversion of the MAC address of the individual device: *nn-nn-nn-na-bc-de*) • Subnet mask: 255.255.0.0 • Gateway: 10.1.0.10
Video settlings	• Target frame rate: 12 fps • Target bit rate: 3200 kbps • Resolution: 1280x1024 • Maximum quantizer: 12 • Minimum quantizer: 4
VSIP	• VSIP Port: 5517 • VSIP Multicast IP Address: 224.16.32.1 • VSIP Discovery IP Address: 255.255.255.255

DHCP Support and APIPA B

DHCP (Dynamic Host Configuration Protocol) allows devices and computers connected to a network to automatically get a valid IP configuration from a dedicated server.

The APIPA (Automatic Private IP Addressing) scheme, available on the Windows operating systems, enables a device to assign itself a temporary IP address.

At startup, a mini dome camera searches for a valid IP network configuration. The device requires this configuration prior to starting its functions. The network configuration for the AVT 9480A devices consists of:

- An IP address
- A subnet mask
- A gateway

The device first looks in its local memory. If no configuration is found, it tries to contact a DHCP server. If DHCP configuration fails—if the device does not find a server or if it cannot get a configuration from it within one minute—the device assigns itself temporary network settings based on the APIPA addressing scheme. This scheme allows a device to find a unique IP address until it receives a complete network configuration, either manually or from a DHCP server.

A device in APIPA mode does not reside on the same subnet as the other devices on the IP network; therefore, it may not be able to see them or be visible to them. Devices use the following temporary APIPA configuration:

- IP address: 176.(a+16).bc.de (based upon the hex to decimal conversion of the MAC address of the individual device: nn-nn-nn-na-bc-de)
- Subnet mask: 255.255.0.0
- Gateway: 10.1.0.10

The *. * portion is based on the MAC address of the device.

A device is in APIPA mode:

- The first time it boots up
- After receiving a duplicate IP address
- When the DHCP server does not have any available IP addresses

DHCP configuration is automatically disabled:

- After a firmware upgrade
- After a factory reset

Technical Specifications C

Here are the AVT 9480A technical specifications:

Table C-1: Technical Specifications

Parameter	Definition
Video	
Compression	MPEG-4 ISO 14496-2 compliant
Frame rate	Up to 12 frames at 1280x1024, up to 15 frames at 800x640 and up to 30 at 640x512
Input	1 composite, 1 Vpp into 75 ohms
Resolution	Scalable from 1280x1024, 800x640 and 640x512
Connections	BNC female (encoders only)
Bandwidth	Configurable between 32 to 7000 kbps
Serial Port - applicable for analog cameras only	
Electric levels	• RS-232C 2 wires • RS-422/485 4 wires (230 kbps max.)
Connectors	Pluggable screw-terminal strip
Operating mode	Transparent serial port supporting any asynchronous serial protocol
Alarm and Audio	
Alarm inputs	2 dry contact
Alarm output	1 relay contact (48V AC/DC at 100 mA max.)
Bidirectional audio	• Line-in (Input): -20 to 0 dBV into 30 kohm • MIC-in (Input): -34 to -14 dBV into 40 kohm • Speaker (Output): -90 to 0 dBV into 10 kohm
Audio connectors	Pluggable screw-terminal strip
Network	
Interface	Ethernet 10/100Base-T, NIC configuration
Connector	RJ-45 jack
Protocols	Transport: RTP/IP, UDP/IP, TCP/IP, multicast IP Others: DNS and DHCP client
Power	
Supply voltage	12VDC or 802.3af class 3 PoE (48VDC)
Consumption	12VDC, 8W, 0.7A | PoE, 9W (class3)

Table C-1: Technical Specifications

Parameter	Definition
Physical	
Enclosure	Metal case with 1/4 inch UNC screw mount
Size	7.65" (194mm) Dia. x 5.75 (146mm) H
Weight	• Unit Weight Recessed/Surface: 2.5 Lbs. (1.2Kg) / 4.5 Lbs. (2.0Kg) • Unit Shipping Weight: 3.5 Lbs. (1.6Kg) / 5.5 Lbs. (2.5Kg)
Environment	• Operating Temperature: -20°C to 50°C • Storage Temperature: -30° C to 60° C
Humidity	90% (non-condensing)
Management	
Configuration	Remote using the *Device Configurator*, Internet Explorer, or Telnet
Certification/Regulation	
USA	FCC part 15 (subpart B, class A)
Europe	CE marked, EN 55022:1998 Class A, EN 55024

MPEG License Statement D

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